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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/661,130	09/13/2000	Abraham R. Matthews	FORT-000300	7711
64128	7590	12/28/2006		
MICHAEL A. DE SANCTIS 756 HARRISON ST. DENVER, CO 80206			EXAMINER MANIWANG, JOSEPH R	
			ART UNIT 2144	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			12/28/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/661,130

Applicant(s)

MATTHEWS ET AL.

Examiner

Joseph R. Maniwang

Art Unit

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 03/06/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/06/06 has been entered.

Specification

2. The title of the invention is not descriptive. A new title is required that is indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 1 recites functional element(s) labeled "virtual router".

Art Unit: 2144

6. The breadth of this term renders this claim indefinite for the inability to properly ascertain what constitutes this logical device. Since the "router" is indeed "virtual", what it exactly is is never recited.

7. All the pending claims rely heavily on proper interpretation of the claimed invention based on the meaning and usage of the term "virtual". As understood in the art, virtual devices are not real, instead they are logical constructs attempting to describe actual programmatic functional code and potentially associated hardware. The claims and specification fail to properly define "virtual router(s), interface(s), and network connection(s)" in sufficient detail to enable one of ordinary skill in the art to determine what may or may not constitute an infringing device/functional element. Further, assuming *arguendo* that the terms are properly defined within the specification and claims to equate actual device(s)/element(s) with these arbitrary labels, the details of the specification cannot be relied on to discern exactly what is being claimed, minimally, since the claims are necessarily broader than the preferred embodiment (best mode) set forth in the specification. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

8. Lastly, the preamble of the claims recite a "routing system". Claim 1 recites a "virtual routing system", and claim 7 recites, simply, "a routing system". No routing determinations or decisions are made by the claimed invention. It is not readily apparent, or required, that actual routing occurs. First, there may be potential enablement issues with the currently submitted claims, since, there is clear inability to

Art Unit: 2144

ascertain particular metes and bounds to the claims as a whole, and additionally to (each) particular element(s) recited in the claim(s). This renders these claims indefinite. Second, the breadth of the claims as previously and currently submitted is stunning. Nothing recited in any one of the claims is found outside of the background of the invention in the specification. General knowledge in the art at the time of invention provided tunneling, VPN support, virtual connectivity, virtual routing of information to particular terminal VPN participants, and multiplexing (i.e., aggregation) of traffic and information flows. Applicant has admitted the prior knowledge of these basic technology features in the specification.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

11. Regarding claim 1, "A virtual routing system, comprising: a plurality of virtual routers...; and a system virtual router" is non-statutory, as the various recited "virtual routers" are software, per se, and therefore not tangibly embodied in a manner so as to be executable.

Claim Rejections - 35 USC § 102

Art Unit: 2144

12. Claims 1-9 are rejected under 35 U.S.C. §102(e) as being anticipated by Salkewicz (U.S. Patent Number 6,609,153), hereinafter referred to as Salkewicz.

13. Salkewicz disclosed virtual routing functionality, inter alia, in Column 11, Lines 7-9, and Column 11, Lines 37-48. These logical "devices" were described as enabled to handle multiple virtual connections to neighboring terminal(s) (i.e., multiple devices), inter alia, in Column 11, Lines 16-36, and Column 12, Lines 40-64, as well as functionally aggregating traffic over both logical constructs and physical media. See, inter alia, Column 13, Lines 8-16. "Binding", as described and understood in the art "couples" connections to processes executing on the local hardware using an interface. Minimally, this allows VPN support on the public Internet (inter alia, Columns 7-8 and 14-15) and complete granularity of control over traffic flows in each, and between, particular VPN definitions (inter alia, Column 7, Lines 29-65). Lastly, a "system router" was clearly evident. See, inter alia, Column 8, Lines 40-42.

14. Claims 1-9 are rejected under 35 U.S.C. §102(e) as being anticipated by Rao et al. (U.S. Patent Number 6,674,756), hereinafter referred to as Rao.

15. Rao disclosed multiple virtual routers, wherein each router had distinct routing table(s) and available resource record(s). See, inter alia, Abstract. Further, each functional "router" offered connectivity to multiple VPN interfaces. See, inter alia, Abstract, and Figure 17. Utilizing the router to route traffic regarding network policies as well as specific connection parameters were also described, inter alia, in Figure 12. Selective VPN traffic filtering for aggregated flows was well known in the art. See, inter

Art Unit: 2144

alia, Column 2, Lines 35-40. Multiple embodiments provide multiple routers, multiple terminals for each router, and multiple flows through each physical medium. See, inter alia, Column 9, Lines 30-44.

16. Claims 1-9 are rejected under 35 U.S.C. §102(e) as being anticipated by Rekhter et al. (U.S. Patent Number 6,463,061), hereinafter referred to as Rekhter.

17. Rekhter disclosed aggregated traffic flows between virtual multiple routing devices, multiple endpoint terminals, and multiple virtually defined networks. See, inter alia, Abstract, Figures 1 and 7, and Column 5, Lines 7-40. Again, binding is disclosed, providing logical connection association with particular process(es) and/or terminals. See, inter alia, Column 8, Lines 38-60. VPN definition/establishment, connection tunneling, both intra- and inter-VPN traffic, and virtual network connections, associated identifiers, and generic connective interfaces were also disclosed. See, inter alia, Columns 5, 7-8, and 21-22.

Response to Arguments

18. Applicant's arguments filed 10/26/06 have been fully considered but they are not persuasive.

19. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Art Unit: 2144

20. Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

21. The breadth of all the claims examined thus far is completely unwarranted.

Applicant's own specification describes all the previously and currently claimed invention as established in the art. Significant modification of the claims is required for proper patentability determination(s). Likewise, significant discussion about the expressly recited functionality, terms, and supporting portions of the specification is strongly advised to advance prosecution of the current application.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gibson et al. (U.S. Pat. App. Pub. 2002/0085559)

Ylonen et al. (U.S. Pat. App. Pub. 2002/0062344)

Ghahremani (U.S. Pat. No. 7,116,679)

Matthews et al. (U.S. Pat. No. 7,111,072)

Lamberton et al. (U.S. Pat. No. 7,003,581)

Gibson et al. (U.S. Pat. No. 6,985,447)

Ammitzboell (U.S. Pat. No. 6,934,292)

Wilson (U.S. Pat. No. 6,885,667)

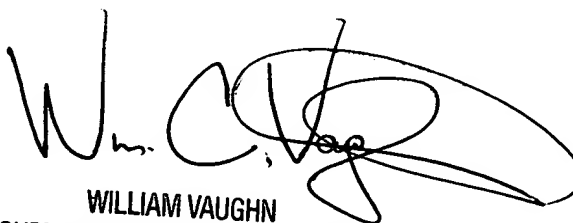
Rao (U.S. Pat. No. 6,789,118)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph R. Maniwang whose telephone number is (571) 272-3928. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JM


WILLIAM VAUGHN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100